TEACHER SELF-EFFICACY TO TEACH ENGLISH LANGUAGE LEARNERS IN MAINSTREAM CLASSROOMS

A Dissertation

by

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ABSTRACT

English language learners (ELLs) are one of the fastest growing student populations in the United States. Teachers have an important role in the lives of all students, but this is especially true for ELLs since student-teacher relationships can affect student achievement outcomes. Teacher self-efficacy, an area of research that investigates teacher perceptions of their preparedness, can provide important information relevant to teacher professional development needs and student-teacher interactions. Unfortunately, research on teachers' self-efficacy related to the instruction of ELLs is limited. It is essential for researchers to develop an instrument that can aid school districts and teacher training programs in providing further assistance to teachers of ELLs.

The purpose of the current study was to create an instrument to measure self-efficacy of teachers working with ELL students. Secondly, this study focused on identifying differences between two groups of teacher participants (pre-service vs. in-service) and teacher variables that predict self-efficacy levels. During Phases I and II, exploratory and confirmatory factor analysis was utilized to create a reliable and valid instrument using two different samples. Phase III of the study compared two teacher groups using an ANOVA, and multiple regressions analyses were used to identify teacher variables that predicted self-efficacy levels.

The results from Phases I and II identified a five factor model within the ELL Teacher Self-efficacy Scale (ETSS). During Phase III, in-service and pre-service teacher self-efficacy were compared and only one factor (Factor II: ELL Teaching Efficacy) presented a statistically significant difference between both groups. In-service teachers reported higher levels of self-efficacy for the total ETSS score and in all factor areas except Factor IV: ELL Language Development Efficacy. Graduate hours and diversity courses were predictors of self-efficacy for in-service teachers. Language and diversity courses were predictors for self-efficacy levels for pre-service teachers. The results from this study add to the limited body of research related to teacher self-efficacy working with ELLs. Furthermore, the ETSS instrument can be used by school districts and teacher training programs to measure their self-efficacy levels and thus to create interventions to facilitate positive student-teacher relationships which ultimately can improve the academic outcomes of ELLs.

DEDICATION

To my family

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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

English Language Learners (ELLs) in the public schools are a rapidly growing segment of the student population in the United States with growth predicted to accelerate in the coming years (Albers, Hoffman, & Lundahl, 2009; LeClair, Doll, Osborn, & Jones, 2009; McCardle, Mele-McCarthy, Cutting, Leos, & D'Emilio, 2005). Although ELLs encompass more than 400 languages, 75% of them are Spanish speakers (Xu & Drame, 2008). While many ELLs ultimately achieve English fluency and are academically successful, many non-English speakers enter the classrooms already at risk and face serious challenges as they attempt to both negotiate the process of learning a new language while also mastering academic content. Despite the challenges faced by ELLs, school districts are now routinely held accountable for ensuring ELLs meet the same rigorous standards as non-ELL students (Council of Chief State School Officers [CCSSO], 2016), a daunting task. While educational policy experts, researchers, and national reports have intensified efforts to address the needs of ELLs, not much is known about factors that can mitigate the risks associated with ELL status beyond simply learning English (Janzen, 2008; Watson, Miller, Driver, Rutledge, & McAllister, 2005). One area that has received some attention, albeit insufficient, is the role of a supportive environment; more specifically the role of teachers' preparedness or their efficacy to work with ELLs (Polat, 2010; Rueda & Ragusa, 2010; Walker, Shafer, & Iiams, 2004). Understanding the instructional environments faced by ELLs may assist researchers,

educators, and practitioners alike in developing policy to better address the needs of ELLs in a general education classroom.

ELLs face many educational risks because of the dual challenge of mastering English proficiency and learning instructional content. ELLs are at risk for grade retention (Duran, 2008), drop out (Duran, 2008; Sheng, Sheng, & Anderson, 2011), cultural and social mismatch (Artiles & Ortiz, 2002; Duran, 2008; National Education Association [NEA], 2011; Sullivan, 2011), and persistent achievement gaps that follow them through their educational careers (Duran, 2008; National Assessment of Educational Progress [NAEP], 2011; NEA, 2011; Rhodes, Ochoa, & Ortiz, 2005). Compounding the problems faced by ELLs is the well-documented practice of placing ELLs in classrooms taught by under-qualified general education teachers (Verdugo & Flores, 2007). Under-qualified general education teachers often do not possess the expertise to meet the educational needs of ELLs in the classroom because they may lack the pedagogical skills to teach content knowledge to ELLs while also addressing their English language proficiency needs (López, 2012). Furthermore, general education teachers are not required to have specialized training or a particular certification to work with ELLs in their general education classroom (Calderón, Slavin, & Sánchez, 2011), which potentially results in under-qualified teachers working with ELLs. In fact, less than 20% of general education teachers hold a certification to teach ELLs (Brown & Doolittle, 2008).

Faced with increasing number of ELLs in American classrooms, one would assume that policy recommendations to assist ELLs in meeting the same rigorous

standards demanded of non-ELLs would trickle down to teacher training programs. Unfortunately, activities in the classrooms are not keeping up with the federal recommendations to meet the educational needs of ELLs. Few teachers possess bilingual or ESL certifications, familiarity with specific instructional needs and best practices in teaching ELLs, or multicultural sensitivity necessary to assist ELLs in achieving their potential (Watson et al., 2005). We know very little about teacher self-perceptions, attitudes, or other characteristics associated with teaching ELLs which may moderate their effectiveness for working with ELLs (Artiles & Ortiz, 2002; Ballantyne, Sanderman, & Levy, 2008; Lucas, Villegas, & Freedson-Gonzalez, 2008; Sullivan, 2011).

What we do know is that having a supportive and responsive school environment can foster a sense of school belongingness thereby laying the foundation for socioemotional responsiveness to learning—an important precursor of readiness to learn. Readiness to learn can increase classroom instructional engagement and lead to a better preparation of ELLs to succeed in school (Espinosa & López, 2007). A positive school climate that is created through positive teacher-student interactions promotes a sense of belonging, fosters behavioral adjustment, and encourages students to achieve their academic potential (Baker, Terry, Bridger, & Winsor, 1997; Pianta, Steinberg, & Rollins, 1995). Like other students, ELLs need a supportive, accepting, and responsive school environment that can support them in overcoming risks associated with being ELL (Espinosa & López, 2007).

As the number of ELLs in classrooms rise, more and more teachers will be working with an at-risk ELL population (Walker & Stone, 2011). One can argue that an important source of variation in an ELL's instructional environment is the teacher. Research spanning various decades has documented the importance of teacher training, attitudes, perceptions and self-perceived efficacy in moderating student performance (Pawan & Craig, 2011; Polat, 2010; Rueda & Ragusa, 2010; Walker et al., 2004). From this research one can reasonably extrapolate that teacher characteristics have the potential to either positively or negatively influence ELL performance outcomes.

In response to federal, state, and local mandates, researchers have recently targeted post-secondary pre-service teacher education training programs as a means of addressing the rising ELL tide (Téllez & Waxman, 2006; Walker & Stone, 2011). Although there are many pre-service and in-service teacher training research priorities, one area that has been investigated, albeit not fully, is teacher self-efficacy for working with ELLs (Durgunoglu & Hughes, 2010; Karabenick & Clemens-Noda, 2004; Paneque & Barbetta, 2010; Polat, 2010). Self-efficacy, and teacher self-efficacy specifically, refers to a teacher's self-perceived sense of preparedness to teach and influence their students' achievement (Bandura, 1977, 1993).

Researchers have found that teacher self-efficacy for teaching, is related to burnout and stress, negative classroom relationships, and the ability to effectively manage and motivate students (Brouwers & Tomic, 2002; Skaalvik & Skaalvik, 2007; Woolfolk, Rosoff, & Hoy, 1990; Yoon, 2002; Yoon, 2007). Furthermore, high levels of teaching self-efficacy have been associated with more positive teaching behaviors,

attitudes, and student interactions in general populations (Ashton & Webb, 1986; Guskey, 1984). Studying the type of teacher characteristics that positively influence a teacher's self-efficacy to work with and teach ELLs could provide researchers and trainers insights into specific teacher training needs and inform the design of teacher training programs or in-service trainings.

Despite what we know about teaching self-efficacy, the evidence on teacher self-efficacy for working with ELLs is comparatively limited (Polat, 2010). A literature search of studies focusing on teacher self-efficacy to work with ELLs resulted in only four studies. In general, these studies found that teacher-student language match, academic courses background, student teacher training, and knowledge about teaching ELLs influenced teacher self-efficacy (Chu & Garcia, 2014; Durgunoglu & Hughes, 2010; Karabenick & Clemens-Noda, 2004; Paneque & Barbetta, 2010; Polat, 2010), but results were not consistent across studies. While informative, these studies pointed to a relative paucity of instruments designed to measure teacher self-efficacy for working with ELLs; a limitation of this literature. Moreover, there is no research, to this author's knowledge, that has documented whether differences are present in the self-efficacy between pre-service and in-service teachers. Evidence of teacher self-efficacy for working with ELLs before they become in-service or practicing teachers may help inform university training efforts. At the classroom level, knowing something about teacher self-efficacy for working with ELLs may provide information on professional development opportunities.

The purpose of this study is to expand on the current research in the area of teachers who work with ELLs through the: (a) development and factor analysis of a teacher ELL self-efficacy scale, (b) subsequent evaluation of ELL self-efficacy among samples of pre-service and in-service teachers, and (c) finally investigation of the moderating relationship of teacher characteristics (e.g., language, training experiences, graduate hours) on self-efficacy. The unique contribution of this study is that it will add to the limited research on teacher self-efficacy for working with ELL students, thereby providing information useful to both trainers of teachers and school district professional development efforts. If particular teacher factors can be identified as influencing a teacher's self-efficacy to teach ELLs, teacher training programs and school training programs can focus on targeting these areas to assist teachers working with the ELL population. The following questions will be addressed in the present study:

1. What are the underlying factors/dimensions of the ELL teacher self-efficacy scale (ETSS) developed specifically for this study?
    a. Based on the pilot data, it was hypothesized that the ETSS developed for purposes of this study would consist of five factors including previous teaching experience, formal teacher academic training, teaching resources available for ELL, language development for ELL, mainstreaming ELLs, classroom instruction for ELL, and knowledge about classroom modifications for ELLs.
2. Do pre-service teachers' self-efficacy differ from in-service teachers' self-efficacy on the derived factors?

a. It is hypothesized that in-service teachers with more years teaching, more training experience, and more certifications are expected to have higher levels of self-efficacy than pre-service teachers, with little training and little teaching experience.

3. Do individual teacher factors, such as language, student teaching, diversity courses, graduate hours, and years of teaching experience, predict differentially teachers' level of self-efficacy to teach ELLs? Do these difference hold true between in-service and pre-service teachers?

   a. It is hypothesized that having a language match similar to the ELL population or exposure to diversity courses also may lead to higher levels of teacher self-efficacy regardless of whether the teacher is pre-service or in-service.

   b. Additionally, having more years of experience and taking graduate courses should increase a teacher's self-efficacy.

CHAPTER II

LITERATURE REVIEW

It is now estimated that by the year 2050 English Language Learners (ELLs) will make up approximately 40% of students in American Schools (Thomas & Collier, 2002). The rate of growth of ELLs in schools is expected to far exceed the resources available to meet their needs. ELLs will continue to be a growing, and possibly staggering, segment of the student population with many of them being Spanish-speakers (Albers, Hoffman, & Lundahl, 2009; LeClair, Doll, Osborn, & Jones, 2009; McCardle et al., 2005). ELLs entering classrooms are facing serious challenges that place them at high risk of achievement difficulties. Despite these challenges, school districts are being held accountable for the performance of ELLs by applying to them the same rigorous standards as to non-ELL students (CCSSO, 2016), a daunting task for teachers. Despite the push to meet instructional needs of ELLs, not much is known about factors that can mitigate against the risks associated with an ELL status beyond simply learning English (Janzen, 2008; López, 2012; Watson et al., 2005). Educators, policy makers, and researchers have identified the instructional environment as one priority area for investigation (De Schonewise & Klingner, 2012; Watson et al., 2005). In this chapter the following areas will be discussed: (a) ELL terminology, (b) ELLs and schooling, (c) risk factors associated with ELL status (d) teachers and ELL students, and (e) the role of teacher efficacy.

ELL Terminology

Multiple terms have been used to describe students identified as non-native English speakers that receive language supports in schools (National Center for Education Statistics [NCES], 2012; Schall-Leckrone & McQuillan, 2012; Xu & Drame, 2008). Until recently, the federal government utilized the term Limited English Proficient (LEP) to identify students as non-native English speakers receiving language supports in schools. In contrast, states and schools have adopted the term English Language Learner (ELL) or English learner (EL) rather than LEP (Callahan, Wilkinson, & Muller, 2010). The No Child Left Behind (NCLB) Act of 2001 defined students with "limited English proficiency" as students who:

- Are not born in the United States and with a native language other than English;
- Are Native American or Alaskan Native and whose residence impedes them from having English language proficiency or English as their native language;
- Are migrants from a region where English is not the dominant language and whose native language is a language other than English; or
- Have difficulties in English, primarily with reading, writing, and receptive and expressive communication, which may cause them difficulties in meeting standards set by the state, in learning in a classroom with English instruction, or in functioning in society (NCLB, 2001).

On December 2015, Every Student Succeeds Act (ESSA) was signed to go into effect during the 2016-2017 school year. A difference between the previous law (NCLB) and the currently approved ESSA lies in the definition for ELL. The ESSA definition states

that difficulties in speaking, reading, writing, or understanding must affect the students' ability to meet the state academic standards rather than the states proficient level of achievement on state standards (CCSSO, 2016).

While there is no universal designated definition, most states use the federal definition in conjunction with a variety of methods to identify students as ELL, with methods varying by state (Kindler, 2002; Sheng et al., 2011). Despite the diversity in definitions, most states agree that ELLs are students whose native language or home language is a language other than English (McCardle et al., 2005; Sheng et al., 2011; Xu & Drame, 2008) and whose English proficiency level limits their ability to benefit fully from learning and functioning in an all-English classroom (Sheng et al., 2011). In this document the term ELL will be used throughout as it is the most widely used in the schools and in research (Callahan et al., 2010). It is also important to acknowledge that there is no one single profile of an ELL student. Most of the ELL population originated from Mexico (40%), followed by the Caribbean and East Asia (10-11%), and Central/South America, Indochina, and West Asia (5-7%). Additionally, ELLs also come from different language backgrounds. Spanish is the most frequently spoken language among ELLs followed by Vietnamese in the U.S. (Sheng et al., 2011). This also varies by state.

ELL students in the United States are represented in most classrooms with numbers anticipated to increase. Their increased numbers are evident in multiple federal and state reports. For example, during the ten-years spanning from 1997-1998 to 2007-2008, the ELL student population in the schools increased to 53.25%, compared to the

total student population that increased 8.45% during the same time period (National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs [NCELA], 2010). Furthermore, in 2012-2013, the ELL population in public schools grades K – 12, was estimated at approximately 4.4 million students enrolled compared to 3.4 million ELL students enrolled during 2000-2001. ELLs accounted for 9.2% of the 49.8 million total student population enrolled during the 2012-2013 academic year, and they accounted for 7.4% of the 46.0 million total student population in 2000-2001 (NCES, 2016; NCES, 2012). Additionally, in the 2012-2013 school year, ELLs composed 10% or more of the public school student population in seven states: Alaska, California, Colorado, District of Columbia, Nevada, New Mexico and Texas. Furthermore, ELLs constituted 22.8% of enrollment in California, a state in which bilingual education is no longer provided. An additional 18 states had ELL student enrollment between 6 to 9.9% of the total student population (NCES, 2016).

In summary, ELLs are a reality in American schools. The numbers are far from stable with predictions indicating that ELLs will continue to make a substantial contribution to the student presence in American schools. Numbers aside, ELLs present numerous challenges at the student, teacher, and school levels that can imperil their ability to benefit from classroom instruction. In the next section ELLs and their schooling in the American educational system is addressed.

ELLs and Schooling in the American Educational System

Federal policies driven by court rulings (e.g., *Lau v. Nichols*, 1974) mandate the identification of ELL students in order to provide them with appropriate educational

services. The *Lau* (1974) decision emphasized the schools' responsibility to implement an equal and comprehensible curriculum for their language minority students. Two specific requirements are expected of schools: to identify students with limited English proficiency and to implement services to assist these ELL students. Once a student has been identified as ELL, they are placed in a specific language program, in addition to their regular coursework (Callahan et al., 2010). Typical identification can start with the use of a home language survey completed by the parent or legal guardian (Abedi, 2008; Callahan et al., 2010). If there is an identification of a home language other than English, the student's English proficiency level is supposed to be assessed using state approved language assessment instruments, which may vary from state to state (Ragan & Lesaux, 2006). The following section will provide a detailed overview about the legislation related to ELLs, and the identification, educational placement, and school supports available for ELLs.

Legislation and Court Rulings in the Education of ELLs. Early legislation related to ELLs was concerned with the inclusion of the ELL population in school classrooms, subsequent legislation focused on appropriately meeting the academic and language needs of the ELL population. Most of this legislation came as a result of court cases related to ELLs driven by parents who advocated for the appropriate placement and assessment of their child's language and academic skills.

Legislation. The first form of support for ELLs was through Title IV of the Civil Rights Act of 1964, which prohibited discrimination by federally funded programs based on factors such as race, ethnicity, gender or nationality. Additionally, a memorandum

issued on May 25, 1970, stated that children with limited expressive or receptive English ability could not be excluded from public schools (Yell, 2012). Furthermore, schools were required to assist students with language difficulties and they could not label ELL students with mental retardation or intellectual disabilities based only on English assessments. Lastly, it was mandated that students must receive support in their native languages (Artiles & Ortiz, 2002).

Later, Title III of No Child Left Behind Act of 2001 (NCLB, 2002) titled the English Language Acquisition, Language Enhancement, and Academic Achievement Act, provided funds for state improvement of educational services for ELLs. The funds provided by NCLB to states were intended to improve ELLs' English language development to meet state standards and the academic demands of the classroom (Texas Education Agency [TEA], 2012). NCLB focused on school improvement by targeting annual testing, academic progress, and teacher quality in the schools. Furthermore, it held the schools accountable for reporting the academic yearly progress (AYP) of special populations, including ELL students, in the areas of reading and math. The legal mandates making schools ensure that ELLs are exposed to the same rigorous standards as non-ELLs posed many controversial challenges for schools attempting to implement NCLB. For example, school districts were challenged to meet AYP, but schools that housed many ELLs often fell short of making AYP. This is especially important because districts may be penalized for not meeting the standards set by their state (Menken, 2009).

AYP aside, at the individual level, ELL students are at high risk of being retained or not allowed to graduate if they do not pass state mandated standardized assessments and exit tests. State tests are usually in English and are designed for native English speakers (Menken, 2009). Thus, ELLs who only have a grasp of conversational English but have not yet mastered academic English perform poorly on these types of tests. Additionally, state tests are created with the assumption that the norm group it was standardized with is a valid fit for ELLs. Standardized test are supposed to measure the same knowledge base for all students, when in fact ELLs, who have not attained full English proficiency encounter a language barrier when taking standardized assessments (Sandberg & Reschly, 2011). Given the pressure for making AYP, it is then not surprising that many teachers focus on teaching-to-the-test, especially when it comes to those teachers with many ELL students in their classrooms (Menken, 2009). Finally, NCLB provides little to no guidance on qualifications that are necessary to teach ELLs in the classroom (Watson et al, 2005).

Legislation mandating services and processes for the inclusion of ELL students has been driven by numerous court rulings. *Diana v. State Board of Education* (1970) ruled that students should be tested in their native languages and that other tools, such as nonverbal tests and classroom support data, should be used to justify special education placement. In *Lau v. Nichols* (1974) the courts ruled that non-English speaking students are to be provided the tools to overcome educational barriers associated with language (Artiles & Ortiz, 2002). Following that ruling, the Equal Education Opportunities Act (EEOA) of 1974 was passed to ensure equal educational opportunity to individuals and

to ensure assistance when language barriers interfered with meaningful classroom participation (Walsh, 2009). Additionally, *Plyler v. Doe* (1982) decreed that undocumented immigrant children could not be denied the right to a free public education.

Other cases also had important implications for the education of ELL students. In *Castañeda v. Pickard* (1981) the courts ruled that educational programming for ELLs must meet three criteria. First, schools were required to select programs based on educational theory. Second, schools were required to implement programs with demonstrated validity and evidence of support for their use in practice. Third, schools were prohibited from recommending programs that did not provide sufficient evidence for results. Finally, in *Gomez v. Illinois State Board of Education and Superintendent Sanders* (1987) the courts ruled that State Education Agencies (SEA) were required under EEOA to meet the educational needs of language minority students including the provision for enforcing minimal standards in remediation programs. These minimal standards included an annual review of programs to investigate whether they are working (i.e., are successful) with the particular student population.

In summary, legislation and court rulings recognized that ELL students had unique educational needs that were not being met by educational systems. Court rulings in particular safeguarded the rights of ELLs to a free and appropriate education. Notwithstanding these court rulings, controversies continued on other fronts most notably identification, placement and supports for ELLs in schools.

Identification. First, among the controversies facing schools with increasing numbers of ELL students was how to accurately identify who would be considered an ELL. To address this need, schools formed Language Proficiency Assessment Committees (LPAC). Under Title III of NCLB the LPAC functions as a support for the educational needs of the ELL through various means and approaches. Most notable of the LPAC responsibilities are to: (a) assess the student's English language proficiency, (b) make high stakes testing assessment decisions, (c) monitor educational progress, and (d) address the educational needs of each ELL student in a school (TEA, 2015). Composed of multiple vested individuals, LPAC members are charged with oversight of ELL instructional and support programs, timelines related to ELLs (particularly with identification and academic progress monitoring), the decision-making process followed during meetings, confidentiality, and familiarity with a student's culture and language backgrounds. LPACs are involved in a variety of meetings related to identification, progress monitoring, and end of year evaluations. LPAC members monitor ELL student progress at the end of the year by evaluating the progress of the ELL student in their current language program and by assessing the ELLs' English language proficiency (TEA, 2015). Additionally, the LPAC also initiates the identification process of the ELL students.

Guided by the LPAC, the ELL identification process is initiated when schools administer a Home Language Survey (HLS) for all students upon enrollment. If the HLS indicates a language other than English, then testing follows to determine the English language proficiency of the student (Abedi, 2008; TEA, 2015). Following the

HLS, an oral language proficiency test (OLPT) in English must be administered to the student. The purpose of the OLPT is to assess the student's level of English and native language proficiency, particularly if bilingual education is of interest (TEA, 2015). After testing is completed, the LPAC gathers testing data and any other information available about the student to make decisions about identification, placement, and programs available for the student. Once the LPAC determines whether the student is indeed an ELL, they recommend an appropriate educational program to meet the needs of the ELL student. Next, the parent receives notification about the ELL classification and the recommended placement, usually bilingual education, ESL, or a special language program. If any additional special programs are available, these are also recommended to the family by the LPAC. These special programs can include summer school or tutoring among any others offered to all general education students. Once the parent and school come to an agreement and parental approval is obtained the student is enrolled in their individualized placement (TEA, 2015).

Additionally, at the end of the school year the LPAC meets to review the progress of each ELL student. Based on the data gathered for this meeting the LPAC will decide if the student should continue in their current placement or if they might be ready to exit the ELL program. The condition for dismissal, or exit from the program, of any ELL is that the student must show mastery through pre-established criteria set by the district, in the areas of reception, expression, reading, and writing of English. Finally, the LPAC must share the ELL student's progress with the parents at the end every year (TEA, 2015).

Educational Placement. Once all testing is completed, parents are notified, and everyone agrees that the student designated ELL will benefit from specialized programming, placement decisions are made. It is at this point that many general education teachers first encounter ELLs. Typical language programs for ELLs include bilingual education and/or ESL (Xu & Drame, 2008). Although practices vary by state, the most common placement decision is instruction in the general education classroom with ESL instruction for thirty minutes (Calderón et al., 2011). Specialized programming can include full-day bilingual education (TEA, 2015). A review of state practices reveals; however, a diversity of placement practices. For example, in Texas, the availability of resources or size of ELL population often determines whether a student is enrolled in ESL or a bilingual education program.

Bilingual education programs vary by state. For example, in some states bilingual education is not allowed (e.g., Arizona, California, and Massachusetts). Texas, on the other hand, has two primary types of bilingual programs – transitional (early exit/late exit) and dual language immersion (TEA, 2015). The transitional programs begin in Kindergarten and have as a goal to phase a student out of bilingual instruction to full English instruction (typically after three to five years). In contrast, dual immersion or dual language programs provide the ELL student an environment in which they are instructed in two languages across all subjects with fellow ELL and native English speakers. The ultimate goal of a dual language program is to maintain and increase the students' fluency both in English and Spanish to ultimately produce a balanced bilingual student. Regardless of the type of bilingual program, in Texas

students are taught in their native language usually by a teacher who is a native speaker of the language or who holds certifications to teach ESL or bilingual education (TEA, 2015).

Alternatives to bilingual programs are ESL programs. ESL programs provide the student with support in their native language while content instruction is in English (Flores, Batalova, & Fix, 2012). ESL programs focus on teaching four language skills: reading, writing, listening, and speaking (Menken, 2009). ESL programs are designed to provide a meaningful education to the student and equal benefit from a general education instruction (Callahan, et al., 2010). Examples of two types of ESL programs used in Texas include content-based and pull-out programs (Flores, et al., 2012). Full-time teachers certified in the area of ESL teach content-based programs. In this program students are taught English as a second language by focusing on second language methods across academic areas. In pull-out programs the ELL student is in a general education classroom and an ESL teacher pulls them out of class. The ESL teacher only provides the student with English language instruction. In both of these programs the ELL student may exit before the 1st grade, but if they entered the program as an ELL after 1st grade they may stay in the program for two to five years before exiting based on the decision of the LPAC team (TEA, 2015).

ELL Risk Factors

Identification, placement and instruction in native language does not necessarily protect ELL students from a myriad of risk factors related to their language status or associated sociodemographic factors. Researchers have identified a variety of risk

factors that affect the academic achievement of ELLs including limited English language proficiency (Artiles & Ortiz, 2002; Duran, 2008; Mantero & McVicker, 2006; McCardle et al., 2005; NEA, 2011; Sheng et al., 2011; Sullivan, 2011), family socioeconomic status (SES; Sheng et al., 2011; Verdugo & Flores, 2007), and cultural differences (Artiles & Ortiz, 2002; Duran, 2008; NEA, 2011; Sheng et al., 2011; Sullivan, 2011; Verdugo & Flores, 2007). Furthermore, these risk factors are associated with elevated dropout rates (Sheng et al., 2011). The following section will elaborate on the three salient risk factors that have been associated with ELL school outcomes: English language proficiency, family socioeconomic status, and cultural differences.

English Language Proficiency. English language proficiency has been related to the academic performance and grade retention of ELLs (Sheng et al., 2011). In fact, difficulties with English language proficiency are identified as one of the leading causes of dropout among ELLs (De Schonewise & Klingner, 2012; Duran, 2008; Sheng et al., 2011). To understand these difficulties one must note the dichotomy in English proficiency, namely conversational and academic English. Conversational English consists of everyday English that is used for non-academic purposes and social interactions. Academic English, on the other hand, is typically used in the general education classroom (e.g., for state standardized tests, and for classroom assignments). These two types of English are often referred to as Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). BICS relates to the fluency of conversational English, and CALP is related to expressive and receptive English ability used during academic demands in the classroom. ELL students acquire

BICS in English through everyday interactions and it is usually developed early on, while they develop CALP through their exposure to academic environments and academic tasks (Cummins, 2008). In the course of learning English, ELLs develop conversational English much quicker and with more ease than academic English, which is developed throughout their schooling. Academic English is more challenging and complicated because it requires higher levels of English proficiency. The risk in simultaneously learning conversational and content-related English is that ELLs, may struggle academically when asked to perform at the same level as their native English-speaking peers across academic tasks (Sheng et al., 2011).

ELL students usually perform lower on academic measures in comparison to fluent English speaking peers (NAEP, 2011; Sheng et al., 2011). Because academic measures are generally constructed for native English speakers, ELLs may struggle understanding the academic language found in these instruments (Sheng et al., 2011). The high and persistent achievement gaps in reading and math experienced by ELLs are evidenced in reports for the National Assessment of Educational Progress (NAEP), which document large reading and math achievement gap between ELLs and their white peers (NAEP, 2011). In the most recent NAEP report (2011) ELLs fell 30 points behind their white monolingual peers on average mathematics scores for 4th grade. In the area of reading, ELLs fell 43 points behind their white peers based on reading average scores for 4th grade (NAEP, 2011).

Family Socioeconomic Status. Researchers also have identified economic disadvantage as a risk factor associated with school failure and increased risk of dropout

(Hodgekinson & Outtz, 1992; Sheng et al., 2011). A family's SES frequently is related to the student's living conditions, surrounding neighborhood, parents' level of education, and extent of parental supervision. Low SES often translates into limited access to important educational resources such as books, tutoring, camps, library visits, or other activities available in the community. Among immigrants, the effects of low SES are especially pernicious. White and Kaufman (1997) found that students from low SES immigrant homes are at greater risk of dropping out of school in comparison to other student groups. SES and English language proficiency combined can predispose ELLs to far more risk for school difficulties than either factor alone.

Cultural Differences. The mismatch between school expectations and home environments also can pose a serious risk for ELL students. American schooling, by its nature, carries expectations about instruction, codes of conduct, child preparation, parental involvement, and student readiness that may or may not parallel the home expectations of ELL students. Specifically, the school environment is part of the mainstream American culture and cultural differences may be experienced in instructional demands, student expectations, daily schedules, and in student-teacher relationships (Carrasquillo & Rodriguez, 2002; Ngo & Lee, 2007).

In summary, ELL students often enter the American schooling system and encounter cultural, language, and academic challenges that place them at high risk of early school failure. These risks follow ELL students as they navigate through the process of learning a new language while also being required to meet federal, state, and local academic standards. Teachers are the first line of support in mitigating the

negative effects of ELL risk factors. Teachers are expected to meet rigorous achievement standards for all their students including ELL students. Teacher preparation to understand the needs of ELLs is, therefore, key to their success. Recently, federal and state legislation has placed an important focus on teacher training and education to meet the needs of ELL students (Wan, Ramsey, & Bravo, 2015; Watson et al., 2005).

Teacher Education

The rising tide of ELLs in American schools has focused federal, state, and local attention on meeting their instructional needs (López, 2012). That the needs of ELLs are challenging is no longer disputed. Teachers provide the frontline effort to address the language and literacy needs of most, if not all ELLs in the United States. The focus on rigorous academic standards for all students, including ELLs, has raised questions about whether or how pre-service and in-service teacher preparation meet the unique needs of ELL students (Téllez & Waxman, 2006; Walker & Stone, 2011). The training that occurs before becoming a teacher is considered pre-service training, whereas the training that occurs after a teacher candidate graduates and becomes certified is considered in-service training. Because general education teachers are expected to meet both the educational needs and accountability requirements of the ELLs in their classroom a renewed interest in teacher training and professional development has emerged (López, 2012). Unlike previous years where instruction for ELLs was primarily the responsibility of the ESL or bilingual teacher, general education teachers are now expected to be instructional specialists responsible for the differentiated instructional

needs of ELL students in their classrooms (Walker & Stone, 2011). Important questions about teacher self-perceptions about their ability to meet the needs of ELLs have arisen, yet we know little about teacher attributes that mediate their readiness to meet the needs of ELL students.

Most mainstream teachers working with these ELLs have little or no training on specific strategies, techniques, or teaching methods that promote academic achievement of ELLs in their classroom, while simultaneously assisting these students with the development of English proficiency (Lucas et al., 2008) - a daunting task. At the pre-service level, Walker and Stone (2011) noted that most pre-service teacher training programs, other than those focusing specifically on ESL or bilingual education, focus little to no attention on the educational needs of ELLs. Because there is little to no universal agreement on curricula to meet the needs of ELL students, it is not surprising that programs vary significantly from those that integrate some content on ELLs in the scope of teacher training, to those that do not have a single concentrated course related to language development, culture, or diversity (NEA, 2011; Lucas et al., 2008). For these reasons, researchers and policymakers alike have targeted teacher training programs and teacher professional development as an avenue to address the learning needs of the rising ELL population (López, 2012; Samson & Collins, 2012). Additionally, in-service professional development, for teachers currently teaching, has been the focus of attempts to better prepare teachers to meet the needs of ELL students (Walker & Stone, 2011). In the following section, teacher training programs, state

certification standards, pre-service teacher training and in-service teaching will be detailed.

Teacher Training. Teacher training programs, usually university based, are generally composed of a sequence of courses in an area of study (e.g., math), core subject areas, and instructional practices, and they include field-based experiences, known as student teaching (GAO, 2009). Other than teachers trained as English teachers, teachers of English as a Second or other Language (TESOL), ESL teachers, or bilingual education teachers, few general education teacher training programs provide pre-service teachers with an identifiable sequence of courses that prepare them with the skills necessary to work with ELL students in their classrooms (Galguera, 2011; GAO, 2009). Lack of appropriate training during pre-service teaching formation experiences often translates to teachers unprepared to meet the instructional needs, linguistics needs, and pedagogical practices necessary to work with ELLs. Well prepared teachers not only understand the challenges of learning a new language, as well as the instructional content, but are also sensitive to the nuances required (e.g. patience, understanding, repetition) to keep ELLs engaged in the classroom (López, 2012). Furthermore, lack of appropriate pre-service teacher training can often result in ELLs lack of classroom participation, lack of peer/teacher interaction, lack of language development, and lack of academic achievement, because they are not being properly engaged by the teacher in the classroom (Harper & de Jong, 2009).

Regarding policy statements for the training of teachers, the Council for the Accreditation of Education Preparation, formerly known as the National Council for

Accreditation of Teacher Education (NCATE, 2012), took a leading role. CAEP provided a set of standards for general education teachers working with ELLs that have been incorporated, although not universally, by some teacher training programs. These standards included the following:

- "Teachers should acquire pedagogical content knowledge which addresses ELLs.
- Assessment and evaluation data should measure teachers' preparedness to work with ELLs.
- Field experiences should provide practice and opportunities to offer incoming teachers the opportunity to watch successful teachers model effective techniques in working ELLs.
- Candidates should understand the range in diversity among ELLs.
- Units [teacher training program and school district] should provide qualified faculty and sufficient resources to support teachers' learning about ELLs" (Ballatyne, et al., 2008, p. 12).

CAEP suggested that these standards be used at either undergraduate or graduate levels of teacher preparation. Other private agencies also made recommendations to prepare teachers to work with ELLs, but the actual implementation of these recommendations is unknown (Ballatyne, et al., 2008). Two other agencies that made recommendations include the National Association of Bilingual Education (NABE) and the TESOL. NABE and TESOL have recommended target domains in teacher training that would prepare quality general education teachers to be equipped to work with ELLs. The recommended domains included the following areas: language, culture, planning,

and managing instruction, assessment, and professionalism (Téllez & Waxman, 2006). Again researchers noted that these domains have been used in some training programs; however, it is unknown whether post-secondary schools systems have adopted these domains into their curricula for teacher training (Téllez & Waxman, 2006).

In addition, a recent report by the United States Government Accountability Office (GAO, 2009) reviewed the preparation of teachers for working with students with disabilities and ELLs. A total of 374 teacher training programs from 50 states were randomly selected to survey teacher training practices for special populations. The GAO found that of the teacher preparation programs reviewed, no more than 20% required one course preparing teachers to work with ELLs. Moreover, the GAO found that less than a third of programs required field-based experiences with an ELL population.

In summary, surveys have documented that some teacher training programs have begun focused efforts to prepare teachers to meet the growing needs of diverse populations, especially ELLs. While optimistic, these efforts are unfortunately still not widely implemented across training programs in all states (Walker & Stone, 2011). It is clear there is a wide gap between the need to prepare teachers to work with the rising numbers of ELLs and actual university-based training efforts. Given the variability in teacher training programs, it is not unreasonable to assume that teachers with little or no formal training on addressing the needs of ELLs will likely have a limited understanding of the challenges faced by this population, thus likely affecting their efficacy to work with these students (Garcia, Arias, Harris-Murri, & Serna, 2010). It is not unreasonable to assume that the lack of knowledge and efficacy about effective instruction for ELLs in

the classroom can lead to a student's lack of academic success (Rhodes et al., 2005). Understanding teacher characteristics that can mediate the effects of instruction on ELL outcomes would thus be important. One teacher characteristic that has been investigated in the literature is teacher self-efficacy. In the following, teacher efficacy is explored.

Teacher Self-Efficacy

Bandura (1977) defined teacher self-efficacy as the individual's capacity to affect the students' academic performance in the classroom. Gibson and Dembo (1984) further expanded Bandura's theory on the concept of teacher self-efficacy and they defined it as a "teachers' evaluation of their abilities to bring about positive student change" (p. 570). Furthermore, an individual's perception of their self-efficacy can affect "one's thoughts, feelings, motivation, and actions" (Paneque & Barbetta, 2006, p. 171). According to these researchers, an individual's perceived self-efficacy influences four major processes: cognitive, motivational, affective, and selection. Thus, teachers' self-efficacy levels can affect the learning environments teachers provide and influence the level of academic progress of their students (Bandura, 1993). A teacher's self-efficacy can influence how they act in the classroom, in particular, this influences their choices, perseverance, and effort when interacting with students (Paneque & Barbetta, 2006; Durgunoglu & Hughes, 2010). Bandura's theory predicts that if a person has high efficacy they will have higher coping behaviors towards their surroundings (Bandura, 1993). Applying this concept to teacher self-efficacy suggests that teachers, who believe student learning can be affected by effective teaching, and who have confidence about

their own teaching abilities, provide a classroom environment that is more conducive to academic achievement and higher expectations (Gibson & Dembo, 1984).

Researchers also identified a teacher's sense of self-efficacy as a factor that influences student academic achievement (Gibson & Dembo, 1984). Researchers have found that teachers' self-efficacy in the classroom is related to managing students' behavior, motivating students, teaching burnout, teaching stress, and negative classroom relationships (Brouwers & Tonic, 2002; Skaalvik & Skaalvik, 2007; Woolfolk et al., 1990; Yoon, 2002; Yoon, 2007). Furthermore, teacher level of self-efficacy is associated with more positive teaching behaviors, attitudes, and student interactions (Ashton & Webb, 1986; Guskey, 1984). Given the potential for teacher efficacy to influence motivation, perseverance, teaching style, and effort, one can extrapolate that teachers with high efficacy, especially for working with ELLs, would be a topic of research interest. Unfortunately, not much is known about teacher self-perceived efficacy for working with ELL students. In light of the limited preparation teachers get for working with ELLs, it is not unreasonable to assume that teacher self-efficacy in working with ELLs would be an issue. The following elaborates on what is currently known about teacher efficacy. To date, most teacher self-efficacy research has focused on the general student population. Few research studies have focused on the ELL population.

As noted earlier, teacher self-efficacy can affect the types of interactions that occur in the general education classroom. Gibson and Dembo (1984) discovered that teachers with higher self-efficacy spend more time interacting with their students in

whole classroom instruction, which was associated with higher levels of student engagement. Furthermore, teachers who display confidence in their teaching ability, communicate higher expectations to their students, are less critical, and are persistent with students having difficulty during classroom instruction. Additionally, although numerous factors have been identified as being associated with teacher self-efficacy, findings have been mixed. Gender, for example, has been identified as a factor that influences a teacher's self-efficacy. In some studies female teachers have been found to have higher levels of self-efficacy than male teachers (Romi & Leiser, 2006), while other studies find that male teachers have higher levels of self-efficacy (Wolf, 2011). Other studies have also found no influence of demographic factors, such as age, gender, and area of study, on teachers' level of self-efficacy in the classroom (Pendergast, Garvis, & Keogh, 2011). Darling–Hammond, Chung, and Frelow (2002), also found that gender and age were not related to teacher self-efficacy, but they did find teaching experiences influenced self-efficacy.

Teaching experience is another teacher characteristic that has been associated with positive effects on teaching self-efficacy (Hoy & Spero, 2005; Raudenbush et al., 1992; Wolters & Daugherty, 2007), but findings have been mixed. A study found that after participating in an embedded field training, designed to augment teaching experience, pre-service teachers' self-efficacy scores were raised (McDonnough & Matkins, 2010). Likewise, Lancaster and Bain (2007) found that pre-service teachers' self-efficacy significantly increased across three different types of field-training settings (mentoring, classroom support, and comparison group). In contrast, some researchers

found that teaching experience had no relation to teacher self-efficacy (Guo, Justice, Sawyer, & Tompkins, 2011).

Self-efficacy also can vary depending on teacher pre-service or in-service status. Hoy and Spero (2005) found that teacher's self-efficacy was higher during the student teaching period and decreased as teachers graduated and worked in the field. Once in schools, the level of support teachers receive does, however, moderate in-service teacher self-efficacy (Hoy & Spero, 2005). In contrast, Wolters and Daugherty (2007) found that new in-service teachers have levels of self-efficacy that are lower than veteran in-service teachers. Furthermore, a more recent study found that teacher's self-efficacy levels are not linear and that at around 23 years of teaching experience self-efficacy peaks and may start to decline (Klassen & Chiu, 2010).

Other factors associated with self-efficacy include grade and formal educational experience. Teachers holding graduate degrees have been identified as having higher levels of teacher self-efficacy (Hoover–Dempsey, Bassler, & Brissie, 1987; Hoy & Woolfolk, 1993). Additionally, researchers have found that teachers in lower grades have higher levels of self-efficacy (Raudenbush, Rowan, & Cheong, 1992; Wolters & Daugherty, 2007). In summary, research in the area of teacher self-efficacy among general education teachers has produced mixed and, oftentimes contradictory, findings. Nevertheless, the need to further study this teacher characteristic is important. Of more relevance to the present study is research by investigators examining the effects of teacher efficacy for working with or teaching ELLs. To this author's knowledge, only four studies exist in the literature that examined efficacy in the context of ELLs.

Karabenick and Clemens-Noda (2004) found that teachers had positive attitudes about ELLs, and generally positive attitudes towards bilingual education and bilingualism. Other interesting findings were that the majority of teachers believed that developing literacy in the native language would assist ELLs with their reading and writing in English, but less than half of teachers believed that ELLs who learned to read and write in their native language would do better in school. Researchers also found that teachers who had more positive attitudes about ELLs perceived their native language as not influencing second language acquisition and academic performance in school. Additionally, teachers with more positive attitudes about ELLs were less likely to state that ELLs required more time than their peers. The teachers who held positive views about ELLs also believed that home culture is enriching and not detrimental to the ELL student. Most importantly though, was that researchers found that teachers with more positive views towards ELLs also had higher levels of self-efficacy (Karabenick & Clemens-Noda, 2004).

Paneque and Barbetta (2010) conducted a study in which they examined special education teachers' self-efficacy to work with ELLs with disabilities. The participants of this study were 202 elementary school teachers. Researchers developed a survey instrument that consisted of a variety of self-efficacy questions targeting working with ELLs with disabilities. Surveys were distributed at 31 elementary schools located in a large, urban school district in the southeast region of the United States. The survey consisted of 20 items rated on a 9-point Likert scale. Overall, researchers found that teachers had high levels of self-efficacy. Additionally, they found that the level of

teacher preparation, the number of years teaching, and the students' SES, did not significantly affect the teachers' self-efficacy levels. In contrast, they did find that the teachers' level of proficiency in the native language of the student influenced their self-efficacy levels.

Durgunoglu and Hughes (2010) found that pre-service teachers did not feel prepared and that they believed their student teaching was not contributing additional knowledge about ELL pedagogy. Furthermore, a statistical analysis revealed that perceived preparedness, measured with the use of an ELL knowledge test, was the only significant predictor of self-efficacy scores. Thus, this study highlighted the importance of teacher preparation for working with ELLs and the relationship between preparedness and teaching efficacy.

A study conducted by Polat (2010) looked at pre-service and in-service teacher's readiness and self-competency, or self-efficacy, about working with ELLs. Results indicated areas of significant differences between pre-service and in-service teacher beliefs. In-service teachers had higher self-competency views to support ELLs in the classroom than pre-service teachers in the following areas: linguistic knowledge, literacy support, and academic development. Additionally, pre-service teachers had higher levels of self-competence than in-service teachers related to socio-cultural awareness. Furthermore, in-service teachers displayed more readiness than pre-service teachers, which Polat (2010) suggested could be due to the lack of experience, practicum, and courses targeting supports for ELLs in the mainstream classroom. Differences in the participant's beliefs about language and linguistic competency in the classroom

disappeared when background factors were taken into consideration such as: previous experience with ELLs, exposure to diversity, languages they have studied, and number of ESL courses they had previously taken. Polat (2010) concluded that teachers in training and those in the classroom may be unprepared, not ready, and may feel incompetent to meet the needs of the ELLs in their classroom.

These four studies all looked at teachers working with ELLs from multiple perspectives. These researchers found multiple factors that influenced teacher self-efficacy such as languages spoken, courses taken, student teacher training, and knowledge base about ELLs. While studies examining teacher self-efficacy for working with ELLs have provided important insights, more research in this area is warranted to address the self-efficacy gap with regard to working with ELLs and the inconsistencies in these studies focused on teacher self-efficacy.

Summary

ELLs in American schools are increasing at an accelerating rate. At the same time, ELLs in schools face the dual challenge of learning English while also having to learn instructional content placing them at high risk of school failure. In a climate of accountability that demands annual yearly progress for all students, including ELLs, schools are struggling to train teachers to meet these demands. In this regard, general education teachers are the front line. Despite their front line status, overall, general education pre-service and in-service training does not adequately prepare teachers for the challenges of working with ELLs (Calderón et al., 2011; Durgunoglu & Hughes, 2010; Polat, 2010). As a consequence, federal, state, and local attention has focused on pre-

service and in-service general teacher education targets for appropriate teacher preparation to meet the demands of the rising ELL population (Téllez & Waxman, 2006; Walker & Stone, 2011). Researchers have also started to look at teacher characteristics that have the potential to moderate the impact of instruction on student learning outcomes (Polat, 2010; Lee, 2005). Teacher self-efficacy, in particular, has been a topic of interest among researcher studying teacher characteristics related to effectiveness. Teacher self-efficacy is important because researchers have found that this characteristic impacts student-teacher interactions and thereby student academic achievement (Gibson & Dembo, 1984).

Current Study

The purpose of this study was to expand on the current research in the area of teachers of ELLs through the (a) further development and factor analysis of a teacher ELL self-efficacy scale, (b) subsequent evaluation of ELL self-efficacy among samples of pre-service and in-service teachers, and (c) investigating the relationship of teacher characteristics (e.g. gender, language, and training experiences) on self-efficacy. The unique contribution of this study is that it adds to the limited body of research on teacher self-efficacy for working with ELL students, thereby providing information useful to both trainers of teachers and school district professional development efforts. If particular teacher factors can be identified as influencing a teacher's self-efficacy to teach ELLs, teacher training programs and school training programs can focus on targeting these areas to assist their teachers working with the ELL population.

CHAPTER III

METHODS

This study focuses on the development of an instrument to assess pre-service and in-service teacher self-efficacy to instruct ELLs. The first component of the study is to determine the factorial structure of the researcher-developed measure with a pilot group, and then, after incorporating the revisions to the measure, extend the participant group and re-examine the factor structure. The derived factors then serve as the dependent variables to answer the remaining research questions. This is a cross-sectional research design, composed of two groups of teacher participants.

Participants

School districts and teacher training programs in universities in Central and South Texas were recruited to participate in this study. The author contacted school districts in Central and South Texas via phone to invite them to participate in the current study. In Phase I, fifteen school districts accepted the invitation to participate. The individual demographic characteristics of the fifteen participating school districts are listed in Table 1. In Phase II, twelve school districts accepted the invitation to participate and their demographic characteristics can be found in Table 2.

In Phase I and II, two University level training programs were contacted and only one program in Central Texas accepted the invitation to participate in the current study. This teacher training program was composed of seven individual teacher preparation tracks based on areas of study (i.e., bilingual education, special education, EC-6

generalist, middle grades, etc.). The two University settings were selected because pre-service teachers are part of teacher training programs and in-service teachers are currently working in schools. All teachers were included for recruitment purposes regardless of type of certification.

Table 1
Phase I District Characteristics

	District Size (Number of students)	% Free or Reduced Lunch	% ELL students
District 1	62,945	84.40%	32.00%
District 2	49,800	95.40%	33.00%
District 3	15,750	71.80%	18.00%
District 4	38,250	25.40%	8.00%
District 5	10,360	33.80%	6.00%
District 6	50,849	36.80%	12.00%
District 7	105,860	46.50%	17.00%
District 8	68,710	35.80%	14.00%
District 9	57,614	59.00%	22.00%
District 10	26,433	72.10%	25.00%
District 11	203,294	80.60%	31.00%
District 12	2,705	27.70%	3.00%
District 13	3,565	40.20%	2.00%
District 14	4,334	14.50%	5.00%
District 15	35,977	56.80%	23.00%

Table 2
Phase II District Characteristics

	District Size (Number of students)	% Free or Reduced Lunch	% ELL students
District 1	64,037	85.10%	31.00%
District 2	989	59.60%	2.00%
District 3	49,593	96.00%	31.00%
District 4	15,611	72.00%	18.00%
District 5	1,875	54.00%	11.00%
District 6	153	92.80%	1.00%
District 7	7,673	2.00%	1.00%
District 8	10,613	35.60%	7.00%
District 9	107,660	48.60%	15.00%
District 10	561	74.20%	15.00%
District 11	2,971	77.50%	16.00%
District 12	36,946	57.10%	23.00%

Phase I was completed with a randomly selected sample of 84 teachers. Of the 84 teachers, 15 were pre-service teachers and 69 were in-service teachers. For the Phase II analysis, an additional 62 participants were recruited, 24 were pre-service teachers and 38 were in-service teachers.

Pre-Service Teachers. This group of participants included undergraduate students completing a teacher training program at a university in Texas. These pre-service teachers may have already had hands-on classroom experience, through teaching hours, and all of them have had approximately *one* year of teaching courses. In Phase I, this sample consisted of 15 participants, ages *20-32*, with a mean age of 23.13 (*SD* = 2.67). In Phase II, this sample consisted of 24 participants, ages *19-24*, with a mean age

of 23.87 (*SD* = 5.27). Pre-service teachers were asked what their anticipated teacher certifications would be upon graduating.

In-Service Teachers. This group of participants included teachers currently teaching in a public school in Texas. In Phase I, this sample consisted of 69 participants, ages *22-60,* with a mean age of 37.98 (*SD* = 9.94). In Phase II, this sample consisted of 38 participants, ages *25-60*, with a mean age of 40.95 (*SD* = 10.74). These participants were regular education teachers either teaching elementary or secondary grades.

Total Sample. Together, the survey was completed by 39 pre-service teachers for a response rate of 20% and 107 in-service teachers for a response rate of 45%, for a total response rate of 33%. Survey response data was gathered through the total number of possible participants each setting reported. Descriptive information for the participant samples are provided in Table 3.

Table 3
Teacher Characteristics (*N = 146)*

	Pre-service (N=39)		In-service (N=107)	
Descriptive Data	Frequency	%	Frequency	%
Ethnicity				
White non-Hispanic	29	74.40%	96	89.70%
Hispanic	8	20.40%	4	3.70%
Black	1	2.60%	2	1.90%
Other	1	2.60%	3	2.80%
Did Not Disclose	0	0.00%	2	1.90%
Languages Spoken				
English	32	82.10%	94	88.68%
English and Spanish	7	17.90%	12	11.32%
Diversity Courses				
Yes	29	74.4%	68	36.40%
No	10	25.6%	39	63.60%

Table 3
Continued.

Descriptive Data	Pre-service (N=39) Frequency	%	In-service (N=107) Frequency	%
Teacher Certifications				
Early Childhood	0	0%	1	0.90%
Elementary	13	33.30%	27	25.20%
Secondary	10	25.60%	26	24.30%
Special Education	1	2.60%	0	0%
English as a Second Language and other	5	12.80%	13	12.20%
Two or more certifications	9	23.10%	36	33.70%
Other	1	2.60%	4	3.70%
Area of Study				
Education	24	61.50%	49	45.80%
Psychology	0	0%	3	2.80%
Science	2	5.10%	7	6.50%
Math	2	5.10%	6	5.60%
English	0	0%	8	7.60%
Bilingual Education	1	2.70%	1	0.90%
Other	5	12.80%	15	14.00%
Education and another area	5	12.80%	18	16.80%

Measure

Data for this study were gathered through a researcher-developed survey. The instrument consists of 80 questions covering a variety of areas such as demographics, educational experience, teaching experience, perception questions about ELL, and self-efficacy questions about working with ELLs. An initial pilot survey was administered to test the 80 questions. After the pilot survey was administered a factor analysis was completed and the survey was revised by a panel of experts to create the final version of the survey. The final pilot questionnaire asked 16 demographic questions and contained 35 self-efficacy items. Demographic questions included in the survey were primarily those that research had previously shown might moderate teacher efficacy on teaching

ELLs levels.

Procedures

As part of the survey creation and pilot study, Institutional Review Board (IRB) approval was obtained from the Office of Research and Compliance at Texas A&M University. The application was submitted and approval was granted on March 1, 2011. As the final step in the survey development, a trial of the survey was administered to a group of pre-service teachers attending a local university in South Texas the fall of 2011. Amendments for the continued use of the survey were submitted to the IRB after each revision. Final approval was granted to conduct the study with the revised survey. Continuing IRB is currently in place. The survey was uploaded on a secure website (Qualtrics, 2015) to facilitate the administration of the survey to participants from different areas of Texas for the additional data collection. The consent form was the first page of the survey and required participants to agree prior to starting the survey.

Survey. To create a valid and reliable measure of teacher self-perceived efficacy to instruct ELL, the literature on generalized teacher efficacy and teacher perceptions for working with ELLs was reviewed. The questions for the survey were formulated based on similar surveys looking at teacher perceptions or self-efficacy about working with ELLs (Batt, 2008; Durgunoglu & Hughes, 2010; Karabenick & Clemens-Noda, 2004; O'Neal, Ringler, & Rodriguez, 2008; Paneque & Barbetta, 2010; Polat, 2010; Reeves, 2006; Walker et al., 2004). The first draft of the survey was developed in the spring of 2010 and finalized in the fall of 2010. After the survey was developed it was reviewed by a panel of experts in the areas of ELL, bilingual education, teaching, and test

development in the spring of 2011. Participants for the trial survey were recruited through a teacher training department at a university in South Texas, which granted approval to participate in the study. The trial survey was in Qualtrics (2015) format and contained 7 questions targeting ELL teacher self-efficacy. Subsequently, 110 pre-service teachers enrolled in their fourth year taking a teacher field based practicum class were contacted and invited to participate via email for a trial run. The email introduced the purpose of the study and assurances of confidentiality. Although a total of 110 pre-service teachers were sent the email containing the link to the online survey, only 12 completed the survey, a response rate of 11%. The data gathered from the initial trial of the survey provided information on the quality of the items as well as highlighting some confusion regarding the term ELL. Respondents reported an inability to determine exactly what constituted ELL.

Further revisions and refinements were conducted after the trial run in the fall of 2011. The survey once again was reviewed in the spring of 2012 and the self-efficacy scale was expanded to include more items to assure the validity and reliability of the instrument. An expert on the schooling of ELLs reviewed the developed measure, and once items were revised, the new scale was piloted.

Phase I and II. Various school districts and teacher training programs of universities in Texas were contacted to participate in this study. These campuses were selected from the same geographical regions in Texas to minimize differences between pre-service and in-service teacher participants based on location. Once the campus (school district and teacher training program) agreed to participate in the study a contact

person was identified. The contact person subsequently forwarded the email survey link to interested teachers. As an incentive, participating pre-service and in-service teachers were given an opportunity to enter to win a gift card raffle of $50 dollars. Participants were given a month and a half to complete the survey. Two weeks after the initial email link, teachers received a reminder email to fill out the survey. Two weeks after the reminder, teachers received one final reminder to fill out the survey. Once data collection was completed, data was imported to IBM SPSS (2012) for analyses.

Data Analytic Strategy

Survey. To explore the structural validity of the pilot version of the ELL self-efficacy scale, an exploratory factor analysis was conducted to examine whether the underlying items represent a central ELL self-efficacy construct or multiple dimensions of ELL self-efficacy. Fit for the model tested was assessed using the comparative fit index (CFI: Bentler, 1990) and the standardized root mean square residual (SRMR: Hue and Bentler, 1995). The chi-square test of model fit was considered as well. Models were considered to fit well if the CFI $\geq .95$ and SRMR $\leq .08$ (Hu and Bentler, 1999). All CFA and EFA models were estimated using Mplus 6.0 (Muthén and Muthén, 2010). For the analysis, full information maximum likelihood was used so that cases with missing values were also included.

Comparison. To address possible differences between pre-service and in-service teachers, a series of descriptives (e.g., mean, standard deviation, minimum, maximum and range) for both the dependent (i.e., ELL self-efficacy) and independent

variables were calculated. Analysis of variance was used to determine what differences existed.

Predictors of Teacher Self-Efficacy. In addition to computing descriptive data, a zero order correlation matrix was computed and a series of multiple regression analyses were employed. The general purpose of multiple regression is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable. Regression analyses were conducted for the determined factors by group (pre-service, in-service).

CHAPTER IV

RESULTS

The present study extended an initial effort to develop a measure of self-efficacy of teachers working with ELLs in their classrooms (ELL Teacher Self-efficacy Scale [ETSS]) to establish and evaluate the scale's psychometric properties as well as determine its factorial structure. Results are presented by research question. SPSS, Version 21 (IBM Corporation, 2012) was used for most of the analyses except where otherwise indicated.

Factor Structure of the ELL Teacher Self-efficacy Schedule (ETSS)

Survey data (Phase I and II) were entered by a trained graduated student into SPSS (IBM Corporation, 2012) for the reliability analysis to calculate coefficient alpha. This analysis resulted in a Cronbach alpha of .96 for all 35 items. Item deletion procedures revealed no increase or reduction in alpha, thus all items were kept for further analysis. A coefficient alpha of this magnitude indicates good internal consistency of the items in the scale (Cortina, 1993).

Exploratory factor analysis (EFA) of the pilot data (N=85) from Phase I was then conducted using principal component factor analysis with varimax rotation. A principal component factor extraction was used since this extraction method is one of the most commonly used methods and it is the preferred analysis by researchers when trying to reduce items into smaller components (Costello & Osborne, 2005). The varimax rotation, an orthogonal rotation, was used because it produces results that are more

interpretable than other rotation methods even though they all produce very similar results (Brown, 2009).

This analysis yielded seven factors that accounted for 79% of the total variance. Two of these factors were only defined by two items and the factors were not considered viable. The four items included (a) It is not hard for me to teach ELLs, (b) I think ELLs are easy to teach, (c) My class is easy to teach when there are many ELLs in my classroom, and (d) It is easy for me to teach my class when there are many ELLs in my classroom. The remaining five factors were named based on a careful review of dominant item loadings; individual items with factor loadings < .45 were not considered for each factor. These five factors and individual item loadings can be found in Appendix A.

The five factors retained were labeled in order of their loadings and were labeled as follows: Factor I: Previous Experience Related Efficacy (e.g., I have enough experience to teach ELLs); Factor II: Resource Efficacy (e.g., I have all the resources I need to teach ELLs); Factor III: Instructional Modification Efficacy (e.g., I feel knowledgeable at making modifications to my classroom for ELLs); Factor IV: Promoting/Developing Multiple Languages Efficacy (e.g., I help ELLs develop English while developing their native language); and Factor V: Classroom Management to Teach ELLs (e.g., It is not hard to teach my class even though there are many ELLs in my classroom). Each factor targeted a different dimension associated with teacher self-efficacy to work with ELLs.

Research Question 1

What are the underlying factors/dimensions of the ELL self-efficacy scale developed specifically for this study? Are the derived factors from the pilot study reliably maintained with a second sample (Phase II)? Based on the pilot data, it was hypothesized that the ETSS developed for purposes of this study would consist of five factors as designated above.

To address this question, 61 additional participants were recruited and completed the ETSS in Phase II. A second reliability analysis was conducted to ensure that the survey's psychometric properties remained acceptable. The reliability analysis resulted in a Cronbach alpha of .97 for all 35 items. The four items that were not considered in the previous EFA analysis were included in the current five factor model since they aligned with other factors when using a second sample. Item deletion procedures revealed no increase or reduction in alpha thus all items were kept for further analysis. The coefficient alpha continued to indicate good internal consistency across all the items in the scale (Cortina, 1993). The next step to address the research question was to examine the goodness of fit of the five factor model using confirmatory factor analysis.

Confirmatory Factor Analysis. A CFA of the ETSS with the second sample of 61 participants was used to assess the model adopted with the pilot sample using Mplus 7.0 (Muthén and Muthén, 2010). Fit for the model tested was assessed using the comparative fit index (CFI; Bentler, 1990) and the standardized root mean square residual (SRMR; Hue and Bentler, 1995). Models were considered to fit well if the CFI $\geq .95$ and SRMR $\leq .08$ (Hu and Bentler, 1999). The use of CFI has been recommended

as an indication of model fit when using smaller samples due to the sensitivity to sample size present in a chi-square test (Hooper, Coughlan, & Muller, 2008). The chi-square test of model fit was also considered. The use of the chi-square test of model fit has several limitations involving lack of power for small sample sizes such that it may fail to discriminate between good and poor fitting models (Kenny & McCoach, 2003).

The CFA yielded a CFI of 0.90, which did not meet the cut off criteria of .95 for CFI; however, researchers have indicated that values above .90 indicate a good fitting model (Byrne, 1994; Ullman, 1996). A value of 0.04 was obtained for SRMR, which met the cut off criteria of ≤ .08. Additionally, values < .05 generally indicate that a model has a very good fit (Hu & Bentler, 1999). A chi-square test of model fit was performed and results were significant, $\chi 2$ (430, N = 35) = 937.54, p < .001. CFA results are reported in Table 4. The factor loadings for this sample in Mplus were similar to the ones yielded with the pilot sample (Appendix B).

Table 4
CFA Results Summary

Scale	*χ2*	*df*	*CFI*	*SRMR*
ETSS	937.54	430	0.90	0.04

The five factors were named according to items with the greatest loadings for that factor loadings, the factors were: Factor I, Experience/Training Related Efficacy (e.g., I have enough experience to teach ELLs; I have sufficient classroom training to work with ELLs); Factor II, ELL Teaching Efficacy (e.g., It is not hard to teach my class even though there are many ELLs in my classroom; It is easy for me to teach ELLs);

Factor III, Resource Efficacy (e.g., I believe that I have all the resources I need to teach ELLs); Factor IV, ELL Language Development Efficacy (e.g., I help ELLs develop English while developing their native language); and Factor V, ELL Adaptation Efficacy (e.g., I feel capable at making modifications to my teaching style for ELLs). A copy of the 35 items can be found in Appendix C.

Research Question 2

Do pre-service teachers' self-efficacy differ from in-service teachers' self-efficacy on the derived factors? It was hypothesized that in-service teachers with more years teaching, more training experience, and more certifications would report higher levels of self-efficacy than pre-service teachers who have minimal training and minimal teaching experience. To address this question, the combined sample of 146 was included. Self-efficacy scores for each scale were determined based on scores (range 1-4 for each factor) on each of the identified factors. An individual's Factor score would be the sum of all the items for that factor. An individual's ETSS Score consisted of the average score of all 35 items on the ETSS. Items were organized into the five corresponding Factors based on the CFA factor loadings previously reported. Each responding participant would then have six scores; five factor scores and an ETSS score. The self-efficacy scores by group can be found in Table 5.

One way Analysis of Variance comparing the two teacher groups on the five subscales and ETSS score showed significance in only one subscale. Only on ELL Teaching Efficacy did significant group differences emerge showed a significant difference [$F(1, 144) = 7.08$, $p = .009$; ES = 0.05] (Table 6).

Table 5
Descriptive Data for the ELL Teacher Self-efficacy Scores (ETSS) by Teacher Status

	Teacher Status					
	Pre-service (n = 39)			In-service (n = 107)		
Scale	*M (SD)*	Min.	Max.	*M (SD)*	Min.	Max.
Experience/Training	2.44 (0.60)	1.00	4.00	2.62 (0.62)	1.00	4.00
ELL Teaching Efficacy	2.32 (0.36)	1.70	3.20	2.56 (0.51)	1.60	4.00
Resource Efficacy	2.28 (0.52)	1.00	3.20	2.39 (0.65)	1.00	4.00
ELL Language Development Efficacy	2.41 (0.56)	1.40	3.40	2.36 (0.54)	1.00	3.60
ELL Adaption Efficacy	2.74 (0.57)	1.20	3.80	2.80 (0.54)	1.60	4.00
ETSS Total	2.42 (0.39)	1.63	3.29	2.56 (0.48)	1.49	3.77

Notes. ELL = English Language Learner; ETSS = ELL Teacher Self-efficacy Scale

Table 6
Results of Analysis of Variance

Scale	F (1, 144)	p	Partial Eta-Squared
Experience/Training	2.37	0.13	0.02
ELL Teaching Efficacy	7.08**	0.01	0.05
Resource Efficacy	0.90	0.35	0.01
ELL Language Development Efficacy	0.18	0.68	0.01
ELL Adaption Efficacy	0.34	0.56	0.01
ETSS Total	2.57	0.11	0.02

Notes. **p<.01; ELL = English Language Learner; ETSS = ELL Teacher Self-efficacy Scale

Research Question 3

Do individual teacher factors, such as ethnicity, language, years teaching, certifications, and teacher training experience, differentially predict teachers' level of self-efficacy to teach ELLs between in-service and pre-service teachers? It is further hypothesized that having an ethnic or language match more similar to the ELL population also may lead to higher levels of teacher self-efficacy regardless of whether the teacher is pre-service or in-service. To test these hypotheses, multiple regression

was used. Entered into the analyses were the following teacher characteristics: years teaching, student teaching hours, in-service hours, graduate hours, diversity courses, and language spoken as appropriate for the teacher group. The descriptive information for the teacher characteristics can be found in Table 7.

Table 7
Descriptive Data for Independent Variables

	Teacher Status					
	Pre-service (n = 39)			In-service (n = 107)		
Variable	*M (SD)*	Min.	Max.	*M (SD)*	Min.	Max.
Language	1.18 (0.39)	1	2	1.11(0.32)	1	2
Student Teaching Hours	487.11 (475.13)	6.00	2700	209.33 (23.72)	0	720
In-Service Hours per Year				66.04 (148.84)	6	1496
Graduate Credit Hours				18.68 (24.27)	0	136
Years Teaching				11.91 (7.79)	1	35

Note. The language variable indicates whether the teacher speaks a language other than English.

Pre-service Teachers

The results of the regression analysis for the ETSS Score indicated that language significantly predicted ($p < .01$) overall teacher self-efficacy for pre-service teachers, explaining 31% of the variance (Table 8). Regression analysis for Experience/Training Related Efficacy (Factor I) indicated that both language and diversity courses significantly predicted scores ($p < .05$) explaining 26.6% of the variance (Table 9). ELL Teaching Efficacy scores (Factor II) scores were significantly predicted by language ($p <$

.01), explaining 40.1% of the variance in scores (Table 10). ELL Language Development Efficacy scores (Factor IV) were significantly predicted by language ($p <$ .01), which explained 34.9% of the variance in scores (Table 11). The multiple regression analyses conducted for Resource Efficacy (Factor III) and ELL Adaptation Efficacy (Factor V) did not yield significant predictors (see Table 12 and 13 respectively).

Table 8
Summary of Multiple Regression Analysis for Variables Predicting ETSS *Scores for Pre-service Teachers (N = 39)*

	Model 1			Model 2		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Language	.41	.18	.41*	0.49	0.14	.48**
Diversity Course	.25	.17	.25	0.19	0.12	.22
Student Teaching	.00	.00	.17			
F		3.29*			7.98**	
R^2		0.29*			0.31**	

Note. *$p < .05$; **$p < .01$; ETSS = ELL Teacher Self-efficacy Scale

Table 9
Summary of Multiple Regression Analysis for Variables Predicting Experience/Training Related Efficacy Scores for Pre-service Teachers (N = 39)

	Model 1			Model 2		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Language	0.44	0.27	0.28	0.47	0.22	0.30*
Diversity Course	0.76	0.26	0.49**	0.52	0.20	0.38*
Student Teaching	0.00	0.00	0.00			
F		3.72*			6.52**	
R^2		0.32*			0.27**	

Note. *$p < .05$; **$p < .01$.

Table 10

Summary of Multiple Regression Analysis for Variables Predicting ELL Teaching Efficacy Scores for Pre-service Teachers (N = 39)

	Model 1			Model 2		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Language	0.46	0.16	0.49**	0.58	0.12	0.62**
Diversity Course	0.06	0.15	0.06	0.07	0.11	0.09
Student Teaching	0.00	0.00	0.23			
F		4.55*			12.03**	
R^2		0.36*			0.40**	

Note: *$p < .05$. **$p < .01$.

Table 11

Summary of Multiple Regression Analysis for Variables Predicting ELL Language Development Efficacy Scores for Pre-service Teachers (N = 39)

	Model 1			Model 2		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Language	0.62	0.25	0.44*	0.85	0.20	0.59**
Diversity Course	-0.23	0.24	-0.18	-0.17	0.17	-0.13
Student Teaching	0.00	0.00	0.24			
F		4.34*			9.67**	
R^2		0.35*			0.35**	

Note: *$p < .05$. **$p < .01$.

Table 12

Summary of Multiple Regression Analysis for Variables Predicting Resource Efficacy Scores for Pre-service Teachers (N = 39)

	Model 1			Model 2		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Language	0.19	0.28	0.14	0.13	0.22	.10
Diversity Course	0.20	0.26	0.15	0.14	0.20	.12
Student Teaching	0.00	0.00	0.15			
F		0.67			0.50	
R^2		0.08			0.03	

Note. *$p < .05$; **$p < .01$.

Table 13
Summary of Multiple Regression Analysis for Variables Predicting ELL Adaptation Efficacy Scores for Pre-service Teachers (N = 39)

	Model 1			Model 2		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Language	0.28	0.30	0.20	0.36	0.24	0.25
Diversity Course	0.17	0.28	0.12	0.20	0.21	0.16
Student Teaching	0.00	0.00	0.13			
F		0.72			1.86	
R^2		.08			.09	

Note: $*p < .05$. $**p < .01$.

Summary. Across factors, whether the pre-service teachers spoke a language other than English and/or had a course on diversity, these variables emerged as significant predictors for the total ETSS score and multiple scales. Notably, none of the predictors considered in these analyses were found to predict efficacy with regard to use of resources or ability to adapt instructional materials for use with ELLs.

In-service Teachers

Additional variables were included for in-service teachers. Multiple regression for the ETSS score indicated that the combination of graduate hours and diversity courses explained 13.3% of the variance (Table 14). Both graduate hours ($p < .01$) and diversity courses ($p < .05$) significantly predicted the ETSS score. Experience/Training Related Efficacy (Factor I) scores were significantly predicted by graduate hours ($p < .05$), which explained 7% of the variance in scores (Table 15). For ELL Teaching Efficacy (Factor II), 18.1% of the variance in scores was explained by two variables (Table 16). The variables of graduate hours ($p < .01$) and diversity courses ($p < .01$) were significant predictors.

Table 14
Summary of Multiple Regression Analysis for Variables Predicting the ETSS *Score for In-service Teachers (N = 107)*

	Model 1			Model 2			Model 3		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Graduate Hours	0.01	0.00	0.30*	0.01	0.00	0.33**	0.01	0.00	0.30**
Diversity Course	0.11	0.12	0.12	0.16	0.10	0.17	0.19	0.10	0.21*
Language	0.31	0.19	0.23	0.21	0.16	0.14			
In-Service Hours	0.00	0.00	0.04	0.00	0.00	0.06			
Years Teaching	0.00	0.01	-0.01						
Student Teaching	0.00	0.00	0.01						
F		1.59			3.69**			6.20**	
R^2		0.16			0.16**			0.13**	

Note. **p* < .05; ***p* < .01; ETSS = ELL Teacher Self-efficacy Scale.

Table 15
Summary of Multiple Regression Analysis for Variables Predicting Experience/Training Related Efficacy Scores for In-service Teachers (N = 107)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Graduate Hours	0.01	0.00	0.22	0.01	0.00	0.26	0.01	0.00	0.22*
Diversity Course	0.05	0.16	0.04	0.12	0.14	0.10	0.18	0.13	0.14
Language	0.37	0.25	0.22	0.30	0.22	0.15			
In-Service Hours	0.00	0.00	0.04	0.00	0.00	0.31			
Years Teaching	0.00	0.01	0.04						
Student Teaching	-0.00	0.00	-0.02						
F		0.90			2.13			3.06*	
R^2		0.10			0.10			0.07*	

Note. **p* < .05; ***p* < .01.

Table 16
Summary of Multiple Regression Analysis for Variables Predicting ELL Teaching Efficacy Scores for In-service Teachers (N = 107)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Graduate Hours	0.01	0.00	0.34**	0.01	0.00	0.34**	0.01	0.00	0.31**
Diversity Course	0.19	0.13	0.20	0.25	0.10	0.25	0.28	0.10	0.28**
Language	0.28	0.20	0.19	0.20	0.16	0.13			
In-Service Hours	0.00	0.00	0.07	0.00	0.00	0.09			
Years Teaching	-0.00	0.01	-0.04						
Student Teaching	0.00	0.01	0.04						
F		2.27*			5.22**			8.94**	
R^2		.21*			0.22**			.18**	

Note. *$p < .05$; **$p < .01$.

Resource Efficacy (Factor III) scores were significantly predicted by graduate hours ($p < .05$), which explained 8.8% of the variance in scores (Table 17). ELL Adaptation Efficacy scores (Factor V) were significantly predicted by diversity courses ($p < .01$), which explained 12.2% of the variance in scores (Table 18). The multiple regression analysis for ELL Language Development Efficacy (Factor IV) did not yield any statistically significant predictors (Table 19).

Table 17

Summary of Multiple Regression Analysis for Variables Predicting Resource Efficacy Scores for In-service Teachers (N = 107)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*B*	*B*	*SE B*	*β*
Graduate Hours	0.01	0.00	0.23	0.01	0.00	0.26*	0.01	0.00	0.24*
Diversity Course	0.16	0.16	0.14	0.19	0.14	0.15	0.20	0.13	0.16
Language	0.30	0.26	0.17	0.19	0.22	0.06			
In-Service Hours	0.00	0.00	-0.10	0.00	0.00	-0.06			
Years Teaching	-0.00	0.01	-0.03						
Student Teaching	-0.00	0.00	-0.01						
F		0.99			2.02			3.89*	
R^2		0.10			0.10			0.09*	

Note. $*p < .05$; $**p < .01$.

Table 18

Summary of Multiple Regression Analysis for Variables Predicting ELL Adaptation Efficacy Scores for In-service Teachers (N = 107)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Graduate Hours	0.00	0.00	0.22	0.05	0.00	0.23*	0.00	0.00	0.20
Diversity Course	0.20	0.14	0.20	0.28	0.12	0.25*	0.31	0.11	0.28**
Language	0.24	0.22	0.16	0.15	0.19	0.09			
In-Service Hours	0.00	0.00	0.02	0.00	0.00	0.05			
Years Teaching	-0.01	0.01	-0.10						
Student Teaching	0.00	0.00	0.09						
F		1.57			2.93*			5.61**	
R^2		0.16			0.13*			0.12**	

Note: $*p < .05$. $**p < .01$.

Table 19
Summary of Multiple Regression Analysis for Variables Predicting ELL Language Development Efficacy Scores for In-service Teachers (N = 107)

	Model 1			Model 2			Model 3		
Variables	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Graduate Hours	0.01	0.00	0.22	0.01	0.00	0.26*	0.01	0.00	0.23*
Diversity Course	-0.08	0.15	-0.08	-0.08	0.12	-0.08	-0.05	0.12	-0.05
Language	0.31	0.24	0.19	0.18	0.19	0.11			
In-Service Hours	0.00	0.00	0.10	0.00	0.00	0.17			
Years Teaching	0.01	0.01	0.09						
Student Teaching	0.00	0.00	-0.08						
F		1.06			1.77			2.29	
R^2		0.11			0.09			0.05	

Note: $*p < .05$. $**p < .01$.

Summary. As with the pre-service teachers, having had a diversity course emerged as a predictor to specific efficacy scales. In addition, graduate level coursework emerged as a predictor for specific scales. Notably, for in-service teachers, speaking a second language did not account for variance in self-efficacy across scales. For in-service teachers, only their efficacy with regard to language development was not predicted by any of the variables considered.

CHAPTER V

SUMMARY

In 2016, ELLs continue to be one of the fastest growing student populations composing 9.2% or 4.4 million of the total student population (NCES, 2016). Attention has increased towards this population as a result of having multiple risk factors that could influence their academic success and lifelong trajectory. Thus, multiple agencies along with educational institutions have identified the need for highly qualified teachers trained to work with ELLs. Although attention has been placed on the need for highly qualified teachers, with the training and preparation to foster a school climate that provides ELLs with an equal opportunity to succeed in school, research continues to remain limited in this area. The focus of the current study was to develop a tool that could assess a teachers' self-efficacy to work with ELLs and secondly, to identify teacher factors that could affect self-efficacy to work with ELLs. Teacher training programs and school districts could use this information to develop interventions to increase teacher self-efficacy for working with ELLs.

The first research question focused on the number of factors included in the ETSS instrument. During the first phase of the study the ETSS was developed and it was hypothesized that the instrument would consist of five factors, this hypothesis was confirmed. The five factors identified included: Factor I, Experience/Training Related Efficacy; Factor II, ELL Teaching Efficacy; Factor III, Resource Efficacy; Factor IV, ELL Language Development Efficacy; Factor V, ELL Adaptation Efficacy.

The second research question focused on differences between pre-service and in-service teachers and it was hypothesized that in-service teachers would have higher levels of self-efficacy as measured by the ETSS. In-service teachers obtained higher self-efficacy scores for the ETSS total scale and all of the five areas of the ETSS scale except for Factor IV, ELL Language Development Efficacy. This is inconsistent with a previous research findings that identified in-service teachers as having higher linguistic knowledge self-efficacy than pre-service teachers (Polat, 2010). Moreover, in-service teachers obtained statistically significant higher scores for only Factor II, ELL Teaching Efficacy. This is consistent with the only study found in the literature that looked at differences between pre-service and in-service teachers. Polat (2010) found that pre-service teachers had lower levels of self-efficacy for teaching ELLs. The researcher concluded that the lack of experience by pre-service teachers could lead to lower self-efficacy levels. It is important to highlight that the mean scores for in-service teachers were higher, in all areas except language development, which could be due to their experience teaching in the classroom. Furthermore, their lower self-efficacy levels for language development could be due to the lack of up to date knowledge about language development once they start teaching in schools.

The third research question focused on the individual teacher factors that could influence their self-efficacy regardless of being in-service or pre-service teachers. It was hypothesized that language, diversity courses, years of experience, and graduate courses would influence self-efficacy values. For pre-service teachers, language significantly predicted self-efficacy values for Factor I, Factor II, Factor IV, and the ETSS total score.

This is consisted with previous research that found that speaking more than one language can positively influence teacher self-efficacy scores (Chu & Garcia, 2014; Paneque and Barbetta, 2010). Additionally, for this population, diversity courses influenced Factor I. Researchers have identified that taking diversity courses can create a positive attitude towards ELLs and increase teacher understanding of the struggles ELLs face thus resulting in higher self-efficacy scores for working with ELLs (Mantero & McVicker, 2006). Student teaching hours did not significantly influence pre-service teacher self-efficacy scores, which is also consistent with previous research findings (Durgunoglu and Hughes, 2010). No pre-service teacher variables significantly influenced the self-efficacy scores for Factor III and Factor V. This could be explained by the lack of real world experience pre-service teachers have thus, their ability to use school resources and use of instructional modifications may be limited.

For in-service teachers, graduate hours significantly predicted self-efficacy scores in all areas except for Factor IV and V. This is consistent with previous research that has found that post-graduate courses positively impact self-efficacy scores in in-service teachers (Hoover–Dempsey, Bassler, & Brissie, 1987; Hoy & Woolfolk, 1993). Furthermore, for this population, diversity courses influenced Factor II and Factor V. Researchers have identified that taking diversity courses positively influences teacher self-efficacy (Mantero & McVicker, 2006). Years teaching, student teaching hours, and in-service hours did not significantly predict in-service teacher self-efficacy, which is consistent with previous findings (Paneque and Barbetta, 2010). Language spoken by in-service teachers did not significantly predict in-service teacher self-efficacy and

similarly language development efficacy was an area in which in-service teachers scored lower than pre-service teachers. For in-service teachers it may be more valuable to have additional post-graduate education resources in order to keep them up to date on current pedagogical practices.

Implications

Based on the current research findings, it is important to focus time and resources on the variables that can influence teacher self-efficacy for working with ELLs. Particularly for pre-service teachers, the focus of teacher training programs should be to tailor degree requirements to match our growing population of linguistically diverse students. Teacher training programs could incorporate language degree requirements or courses that focus on language development in culturally and linguistically diverse students. Furthermore, diversity courses should be readily available and integrated into degree requirements for teachers. It is important to focus on language and diversity courses for this population since these two variables positively affect pre-service teacher self-efficacy. Additionally, the current ETSS instrument could be used as a measure by teacher training programs to assess the needs of pre-service teachers in order to tailor course components based on the five ETSS areas. This instrument could also be used as a pre-/post- measure to track teacher's efficacy regarding ELL throughout a student's undergraduate education.

When working with in-service teachers, key individuals that can influence their professional development within a school setting are a school psychologist or a district representative in charge of teacher preparedness. School psychologists have the training

and resources to provide assistance to districts and their teachers. The ETSS tool can be used to identify areas of need for teachers based on the five ETSS areas. It is important to note that graduate hours and diversity courses can positively influence in-service teacher self-efficacy and school psychologists can use this information to tailor professional development opportunities. Furthermore, school psychologists could be involved in grant proposals to further assist teachers in developing higher levels of self-efficacy when working with ELLs. Grant proposals could include requests for professional development resources, financial assistance for post-graduate courses at a local college or distance learning education, or the creation of interest groups to help veteran teachers support new teachers. The ETSS tool can provide school psychologists with insight into the needs of each school or the district as a whole. It could also be used to work one-on-one with teachers through consultation support.

Limitations

Several limitations have been identified in the current study. The first limitation of this study is the small sample size. The current results are based on a portion of the population and a larger sample size could provide additional information about teacher self-efficacy. A second limitation is that this study sample was collected only in Texas where the majority of the ELL population speaks Spanish and is of Mexican heritage. Additionally, the majority of teachers listed Spanish as their second language and this could limit the generalizability of the study in areas where Spanish is not the predominant language amongst ELLs. Several limitations were related to teacher factors. The first limitation related to teachers is that the instrument relies on self-report,

which may not be a true representation. A second limitation related to teachers is that no identifying information was provided to match the teacher responses to their particular school. Thus, specific campus information about their ELL population was not available. One final limitation is that teachers were not compared based on the type of grade level they taught (e.g., elementary vs. middle school). This information could provide a further layer of differences in self-efficacy when teaching ELLs at various ages.

Future Research

Future research in this area could expand this current study by using a larger sample size that incorporates various states. This could provide additional information about the reliability and validity of the ETSS instrument. Additionally, by expanding this research to various states it could provide a broader sample of languages between teachers and the ELL student populations. Furthermore, participating campuses could be give a numeric code, which could be entered on Qualtrics (2015) in the title page of the survey, in order to match survey results with corresponding ELL populations based on each campus. Future research in this area could use additional teacher variables such as grade level taught and special education training. Follow up measures could also be used such as focus groups and classroom observations to improve the validity of teacher responses. To achieve this, a campus liaison could be established and a paper measure can be provided to improve response rates.

Conclusion

Researchers have focused on various aspects of teachers and their environments when designing their instruments addressing teacher interactions with ELLs. Common themes are seen in the instruments researchers have used, but no single study has attempted to compile all findings in this area. Thus, for future studies it is important to design a study that looks at similar topics, and which might replicate findings and identify new areas of need. This study took a different approach as it compared in-service and pre-service teachers and teacher factors that could influence teacher self-efficacy. Finding out if differences exist between these two populations and variables that influence their self-efficacy when working with ELLs can lead to an increase in awareness for professional development and teacher training courses that explore multicultural topics. Particularly for school districts, identifying areas of need for in-service teachers will be extremely beneficial especially since assistance can be provided through the following means: professional development, district-wide assistance, and consultation services. Furthermore, with the ELL growth in the U.S., school districts and teacher training programs need tools to assist them when identifying interventions that can better prepare teachers of ELLs by building their self-efficacy. It is essential to build teacher self-efficacy for working with ELL students given that teacher self-efficacy can positively impact the student-teacher relationship and student academic achievement.

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APPENDIX A

Table 20

Results of Principal Component Analysis with Varimax Rotation for 35 Items in the ELL Teacher Self-Efficacy Scale (N = 85)

	Factor I (46%)	Factor II (10%)	Factor III (7%)	Factor IV (6%)	Factor V (4%)	Factor VI (3%)	Factor VII (3%)
I have enough experience to teach ELLs.	.89						
My experience is sufficient to teach ELLs.	.83						
I have acquired enough experience to teach ELLs	.82						
I think that I have enough experience to teach ELLs.	.79						
I have sufficient classroom training to work with ELLs.	.78						
I have adequate educational training to work with ELLs.	.75						
My educational training is enough to work with ELLs.	.73						
I feel that I have enough experience to teach ELLs.	.68						
I feel that I have all the resources I need to teach ELLs.	.67						
I have enough educational training to work with ELLs.	.63						
My formal training is sufficient to work with ELLs.	.61						

Table 20.
Continued.

	Factor I (46%)	Factor II (10%)	Factor III (7%)	Factor IV (6%)	Factor V (4%)	Factor VI (3%)	Factor VII (3%)
I have all the resources I need to teach ELLs.		.86					
I believe that I have all the resources I need to teach ELLs.		.86					
I think that I have all the resources I need to teach ELLs.		.81					
I feel capable at making modifications to my teaching style for ELLs.		.79					
I think I can make modifications in my teaching for ELLs.		.75					
The resources I have are sufficient for me to teach ELLs.		.73					
I feel knowledgeable at making modifications to my classroom for ELLs.			.75				
I feel skilled at making modifications to my classroom teaching for ELLs.			.66				
I feel competent at making modifications to my classroom teaching for ELLs.			.63				
I help ELLs develop English while developing their native language.				.88			
I assist ELLs in developing their native language and also English.				.86			
I assist ELLs in acquiring English while developing their native language.				.85			

Table 20.
Continued.

	Factor I (46%)	Factor II (10%)	Factor III (7%)	Factor IV (6%)	Factor V (4%)	Factor VI (3%)	Factor VII (3%)
With my assistance ELLs develop English while developing their native language.				.84			
I help ELLs develop their native language while developing English.				.73			
It is not hard to teach my class even though there are many ELLs in my classroom.					.73		
Even if my classroom has many ELLs I do not find it hard to teach my class.					.71		
It is not hard for me to teach my class when there are many ELLs in my classroom.					.68		
It is easy for me to teach ELLs.					.69		
I do not find it hard to teach ELLs.					.64		
I find it easy to teach ELLs.					.58		
It is not hard for me to teach ELLs.						.70	
I think ELLs are easy to teach.						.46	
My class is easy to teach when there are many ELLs in my classroom.							.85
It is easy for me to teach my class when there are many ELLs in my classroom.							.84

Note. Factor loadings < .45 are suppressed

APPENDIX B

Table 21
Factor Loadings from Confirmatory Factor Analysis of the ELL Teacher Self-Efficacy Scale (N = 61)

	Factor I (51%)	Factor II (9%)	Factor III (7%)	Factor IV (5%)	Factor V (3%)
I have enough experience to teach ELLs.	.83				
My experience is sufficient to teach ELLs.	.81				
I have acquired enough experience to teach ELLs.	.81				
I think that I have enough experience to teach ELLs.	.80				
I have sufficient classroom training to work with ELLs.	.77				
I feel that I have enough experience to teach ELLs.	.75				
My educational training is enough to work with ELLs.	.74				
I have adequate educational training to work with ELLs.	.73				
I have enough educational training to work with ELLs.	.68				
My formal training is sufficient to work with ELLs.	.65				
It is not hard to teach my class even though there are many ELLs in my classroom.		.77			
Even if my classroom has many ELLs I do not find it hard to teach my class.		.72			
My class is easy to teach when there are many ELLs in my classroom.		.70			
It is easy for me to teach ELLs		.70			
I think ELLs are easy to teach.		.69			
I do not find it hard to teach ELLs.		.69			

Table 21
Continued.

	Factor I (51%)	Factor II (9%)	Factor III (7%)	Factor IV (5%)	Factor V (3%)
It is not hard for me to teach my class when there are many ELLs in my classroom.		.68			
It is easy for me to teach my class when there are many ELLs in my classroom.		.66			
I find it easy to teach ELLs.		.64			
It is not hard for me to teach ELLs.		.59			
I believe that I have all the resources I need to teach ELLs.			.85		
I have all the resources I need to teach ELLs.			.80		
I think that I have all the resources I need to teach ELLs.			.80		
The resources I have are sufficient for me to teach ELLs.			.70		
I feel that I have all the resources I need to teach ELLs.			.53		
I help ELLs develop English while developing their native language.				.88	
I assist ELLs in acquiring English while developing their native language.				.87	
With my assistance ELLs develop English while developing their native language.				.84	
I help ELLs develop their native language while developing English.				.77	
I assist ELLs in developing their native language and also English.				.77	
I feel capable at making modifications to my teaching style for ELLs.					.76

Table 21
Continued.

	Factor I (51%)	Factor II (9%)	Factor III (7%)	Factor IV (5%)	Factor V (3%)
I feel knowledgeable at making modifications to my classroom for ELLs.					.75
I feel skilled at making modifications to my classroom teaching for ELLs.					.63
I think I can make modifications in my teaching for ELLs.					.63
I feel competent at making modifications to my classroom teaching for ELLs.					.61

Note. Factor loadings < .50 are suppressed

APPENDIX C

1. I find it easy to teach ELLs.
2. I think ELLs are easy to teach.
3. I do not find it hard to teach ELLs.
4. It is not hard for me to teach ELLs.
5. It is easy for me to teach ELLs.
6. I help ELLs develop their native language while developing English.
7. I assist ELLs in acquiring English while developing their native language.
8. I assist ELLs in developing their native language and also English.
9. I help ELLs develop English while developing their native language.
10. With my assistance ELLs develop English while developing their native language.
11. I feel that I have enough experience to teach ELLs.
12. I think that I have enough experience to teach ELLs.
13. I have acquired enough experience to teach ELLs.
14. I have enough experience to teach ELLs.
15. My experience is sufficient to teach ELLs.
16. I feel that I have all the resources I need to teach ELLs.
17. I have all the resources I need to teach ELLs.
18. The resources I have are sufficient for me to teach ELLs.
19. I think that I have all the resources I need to teach ELLs.
20. I believe that I have all the resources I need to teach ELLs.
21. It is not hard for me to teach my class when there are many ELLs in my classroom.
22. It is not hard to teach my class even though there are many ELLs in my classroom.
23. Even if my classroom has many ELLs I do not find it hard to teach my class.
24. My class is easy to teach when there are many ELLs in my classroom.
25. It is easy for me to teach my class when there are many ELLs in my classroom.
26. I have enough educational training to work with ELLs.
27. I have sufficient classroom training to work with ELLs.
28. I have adequate educational training to work with ELLs.
29. My formal training is sufficient to work with ELLs.
30. My educational training is enough to work with ELLs.
31. I feel competent at making modifications to my classroom teaching for ELLs.
32. I feel skilled at making modifications to my classroom teaching for ELLs.
33. I think I can make modifications in my teaching for ELLs.
34. I feel capable at making modifications to my teaching style for ELLs.
35. I feel knowledgeable at making modifications to my classroom for ELLs.